A Large Area Rapid Imaging Analysis Tool.

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The Large Area Rapid Imaging Analysis Tool, or LARIAT, has been designed to provide full-field near edge x-ray absorption spectroscopy (NEXAFS) imaging. Using the combination of a magnetic projection lens and grid-less electrostatic lenses, LARIAT is capable of collecting all electrons emitted within the field of view, leading to high quality images with a collection rate limited in many instances by the electronics readout. Raw image resolutions on the order of 5 μm have been achieved, and can be improved by an order of magnitude using a suite of image processing tools. LARIAT will be installed on the NIST 'SST' beamline suite at NSLS II. Here we will provide an overview of the system design, some initial results from testing at NSLS, and recent updates.